

WHAT IS CLAIMED:

1. A method for communicating in a system that includes at least a first base station connected to a packet network, the first base station serving a first cell, said method comprising:

5           connecting a second base station to the packet network;  
            the second base station automatically identifying the first base station;  
            receiving, at the first base station, communications from a wireless device in the first cell served by the first base station; and  
            handing off the wireless device from the first cell to a second cell served by the second base station by a two way exchange of information between the first base station and the second base station.

2. The method of claim 1, further comprising:

            the first base station and the second base station exchanging  
10           information over the packet network to determine a coverage area for the second cell served by the second base station.

3. The method of claim 1, wherein the step of the second base station identifying the first station includes:

20           the second base station transmitting to a carrier database a message requesting addresses for other base stations connected to the packet network;  
            the carrier database transmitting an address for the first base station to the second base station; and  
            the second base station transmitting a message to the first base station

using the address for the first base station.

4. The method of claim 3, further comprising:

the second base station transmitting a message to a central database

5 requesting an address for the carrier database; and

the central database, in response to receiving the message from the second base station, transmitting an address for the carrier database to the second base station.

10 5. The method of claim 1, wherein the step of the second base station identifying the first base station includes:

the second base station transmitting a broadcast message on the packet network; and

15 the first base station transmitting a reply message to the second base station in response to receiving the broadcast message.

6. The method of claim 1, wherein the wireless device includes a computer.

20 7. The method of claim 6, wherein the computer includes a personal digital assistant (PDA).

8. The method of claim 1, wherein the wireless device uses the mobile Internet protocol (IP) to send the communication to the first base station.

25 9. The method of claim 1, wherein the first base station connects to the

packet network via an Ethernet compatible interface.

10. A system, comprising:

a first base station that controls communications with one or more wireless

5 devices in a first cell;

a second base station that controls communications with one or more wireless  
devices in a second cell; and

a packet network connecting the first base station and the second base  
station;

10 wherein the first base station automatically identifies the second base station  
after being connected to the packet network; and

wherein the first base station and the second base station engage in a two  
way information exchange over the network to hand off one or more of the wireless  
15 devices in the first cell from the first cell to the second cell.

11. The system of claim 10, wherein the first base station is further capable of  
engaging in a two way exchange of information with the second base station to  
determine a coverage area for the first cell.

20 12. The system of claim 10, wherein the first base station further transmits to  
a carrier database a message requesting addresses for other base stations  
connected to the packet network, receives from the carrier database an address for  
the second base station, and transmits a message to the second base station using  
the address for the second base station.

25

13. The method of claim 12, wherein the second base station further  
transmits a message to a central database requesting an address for the carrier  
database, receives from the central database the address for the carrier database,  
and transmits a message to the carrier database using the address for the carrier  
5 database.

14. The method of claim 10, wherein the first base station further transmits a  
broadcast message on the packet network, and receives a reply message from the  
second base station in response to the broadcast message.

15. The system of claim 10, wherein at least one of the wireless devices  
includes a cellular phone.

16. The system of claim 10, wherein at least one of the wireless devices  
includes a computer.

17. The system of claim 16, wherein the computer includes a personal digital  
assistant (PDA).

18. The system of claim 10, wherein the wireless device communicates with  
the first base station using mobile internet protocol (IP).

19. The system of claim 10, wherein the first base station connects to the  
packet network via an Ethernet compatible interface.

20. A base station for communicating with a wireless device, comprising:

a network interface that connects to a packet network;

an antenna interface that connects to an antenna for communicating with one or more wireless devices in a first cell served by the base station;

5 a memory that includes:

a program for automatically identifying other base stations, and

a program for engaging in a two way information exchange with one of the other base stations to hand off, from the first cell to a second cell served by the other base station, one or more of the wireless devices in the first cell; and

a processor that executes the program.